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Knowledge and Use of Folic Acid by Women of Childbearing Age — United States, 1995 and 1998

In the United States, approximately 4000 pregnancies are affected by neural tube defects each year; 50%–70% of these developmental defects could be prevented with daily intake of 400 μg of the B vitamin folic acid throughout the periconceptional period (*1*). In 1992, the Public Health Service recommended that all women capable of becoming pregnant consume 400 μg of folic acid daily throughout their childbearing years to reduce their risk for having a pregnancy affected by neural tube defects (*2*). In 1998, the Institute of Medicine recommended that all women of childbearing potential consume 400 μg of synthetic folic acid per day from fortified foods and/or a supplement in addition to food folate from a varied diet (*3*). This report summarizes the findings of a survey conducted during July–August 1998 to assess folic acid knowledge and practices among women of childbearing age in the United States (*4*) and compares these results with those from a similar survey conducted in 1995. The findings indicate that 7% of women know folic acid should be taken before pregnancy to reduce the risk for neural tube defects.

In 1998, the March of Dimes Birth Defects Foundation contracted with the Gallup Organization to conduct a random-digit–dialed telephone survey of a stratified national sample of 2115 women aged 18–45 years. The response rate was 52%. The margin of error for estimates based on the total sample size was ±3%; for comparisons involving subsets of the sample, the margin of error was greater. Statistical estimates were weighted to reflect the total population of women aged 18–45 years in the contiguous United States who resided in households with telephones. The 1998 survey included many of the same questions asked in 1995, and the methods employed were essentially the same (*4*).

Overall, 68% of women reported having ever heard of or having ever read about folic acid, a 31% increase from 52% in 1995. Awareness of folic acid was lowest among women aged 18–24 years (50%) and women who had less than a high school education (40%). Of all women surveyed, 13% knew that folic acid helps prevent birth defects, and 7% knew that folic acid should be taken before pregnancy (Table 1), compared with 5% and 2%, respectively, in 1995.

In 1998, 32% of women reported taking a vitamin supplement containing folic acid on a daily basis, compared with 28% in 1995. Among women who reported being not pregnant at the time of the survey, 29% reported taking a vitamin supplement

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TABLE 1. Knowledge, behavior, and source of knowledge regarding folic acid among childbearing-aged women — United States, 1995 and 1998*

Characteristic	1995	1998
Knowledge		
Heard of folic acid	52%	68%
Knew folic acid can help prevent birth defects	5%	13%
Knew folic acid should be taken before pregnancy	2%	7%
Behavior		
Take folic acid daily (nonpregnant women)	25%	29%
Take folic acid daily (all women)	28%	32%
Source of knowledge		
Magazine/Newspaper	35%	31%
Radio/Television	10%	23%
Health-care provider	13%	19%

*The margin of error for estimates based on the total sample size was ±3%.

Source: March of Dimes Birth Defects Foundation.

containing folic acid, compared with 25% in 1995. The proportion of all women who took a vitamin containing folic acid less frequently than daily remained at 11%. Those who continued to be the most likely to take vitamin supplements containing folic acid on a daily basis include women aged 25–45 years (34%), college graduates (40%), and those with high incomes (e.g., 38% among women whose annual household income is ≥$50,000).

From 1995 to 1998, the proportion of women who reported obtaining information about folic acid from magazine or newspaper articles decreased from 35% to 31%. However, the proportions that reported learning about folic acid from radio or television and health-care providers increased from 10% to 23% and from 13% to 19%, respectively (Table 1).

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Editorial Note: Although the proportion of U.S. women who were aware that folic acid can prevent birth defects and that folic acid should be taken before pregnancy had increased since 1995, the findings in the 1998 survey indicate that only a small percentage of women were aware of the potential benefits of periconceptional intake of folic acid. Health-care providers, who were the source for information for only one in five women surveyed who had heard of folic acid, have an important role in promoting preconceptional health, including daily intake of 400 μg of folic acid throughout the childbearing years among women of childbearing potential.

An important limitation of the Gallup telephone survey is the low response rate (approximately 50%). In particular, knowledge and behavior patterns of nonparticipants may have been different from those of participants.

Results from two surveys (CDC, unpublished data, 1998; March of Dimes Birth Defects Foundation, unpublished data, 1998) suggest that professional education is needed to increase the proportion of health-care providers who recommend their

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patients of childbearing age consume 400 μg of folic acid daily. Health-care providers need to be aware that each encounter with a woman of childbearing age represents an opportunity to promote preconceptional health. Because approximately half of all pregnancies in the United States are unintended, both the Public Health Service and the Institute of Medicine recommendations emphasize the importance of periconceptional folic acid consumption for all women of childbearing potential (*5*).

During April and May 1998, CDC conducted focus groups that included 58 health-care providers (physicians, nurses, nutritionists, and pharmacists) who spend at least half of their time providing care to women aged 18–35 years (CDC, unpublished data, 1998). These providers reported gaps in knowledge about the benefits of folic acid, pressures from the health-care delivery system that limit patient contact time, a lack of educational materials (e.g., handouts and daily reminders on intake and health assessment forms) to teach and counsel women about the benefits of periconceptional folic acid intake, and the importance of professional education for all members of multidisciplinary health teams.

In 1998, the March of Dimes conducted a study of attendees of departmental grand rounds at 19 nonrandomly selected academic centers with residencies in obstetrics and gynecology (March of Dimes Birth Defects Foundation, unpublished data, 1998); 463 attendees completed questionnaires about their knowledge and behavior related to folic acid. This informal survey indicated that 30% of the attendees did not know the recommended daily amount of folic acid, and 36% reported that they "rarely" or "sometimes" recommended folic acid to their patients.

To help prevent neural tube defects, the March of Dimes will invest up to $10 million for a 3-year national folic acid education campaign. In addition, under the leadership of CDC and the March of Dimes, the National Council on Folic Acid was formed in 1997 as a coalition of organizations working to reduce the rate of neural tube defects through folic acid education. In January 1999, the council launched a major initiative to use media, new public and professional education materials, and community programs to promote neural tube defect prevention activities in the United States.

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